bacteria can cause the immediate clot formation so often seen and is inclined to refer it to the tissue coagulins of the vessel walls, which gain access to the blood through the needle holes. This explanation appeals to me more than the infection etiology for the early or immediate thrombi, and probably each explanation, in the appropriate time and place is true, the common coagulation-causing-substances producing the immediate and infection the later thrombi.

Be that as it may, the great obstacle to much attractive and beneficial surgery is the thrombus and even though it seems, from Carrel's latest reports, that his final technic almost obviates the danger, we must remember that this is in the hands of a man especially expert at this particular work, while what we want is a technic that will make arteriorrhaphy any surgeon's operation, as appendectomy has come to be. At present the high percentage of failures limits the procedure to traumatic cases in which an artery is cut almost or wholly across, when a surgeon can choose between an attempt at suture and ligation. The number of operators who will deliberately open a vessel to remove a thrombus is small; the chances should be better if the obstacle to the circulation was an embolus and if an early diagnosis can be made this might prove, in peripheral arteries, a feasible procedure in the hands of many; while until the technic has been improved the transplantation of vessels and viscera will probably have to be denied to man and limited to the lower animals.

RHEUMATISM IN CHILDREN.*

By MILLICENT COSGRAVE, M. D., San Francisco.

During the past three years in the children's clinic, it has been my good fortune to observe a number of cases of rheumatism in children, and to note the various aspects under which this disease presents itself. So much so that at the present time the simplest case receives attention, while all cases of tonsillitis, growing pains and chorea are viewed with suspicion, their history taken in detail and a physical examination made.

Rheumatism manifests itself in children very differently from what it does in adults, not alone by arthritis but by tonsillitis, chorea, endocarditis and myocarditis with acute or subacute symptoms such as "growing pains," stiffness of joints, etc.

The history of rheumatism has received a tremendous amount of attention during the past years and is still a matter of dispute; many English writers regard the lesions as due to chemical substances. Fuller thought lactic acid the cause. The uric acid theory has always had followers while others believe that putrefactive substances absorbed from the intestine cause the disease. Cole of Johns Hopkins, Poynton and Payne of London, Wasserman and Friedlander of Germany, and many others considered the evidence of these views insufficient and the bacteriological theory was suggested.

The cause of an attack, the tendency to spontaneous recovery, the multiplicity of the lesions, all led to the view that acute articular rheumatism is infectious in origin. Evidence as to the possibility of contagion is not wanting. Jossereau of Paris believed this and Friedlander of Leipsic went so far as to isolate cases. However, there is no evidence of direct contagion to support this view.

Cole of Johns Hopkins examined thirty cases of rheumatic fever and no germs were found in any case. He states that in his opinion the cause of the disease has not been discovered and that it may be:

First.—A specific infectious disease, the cause of which is unknown, and the cocci a secondardy invasion.

Second.—That there is no disease such as we call acute articular rheumatism. What we call acute articular rheumatism is a mild or moderate disease of strepto-coccus origin or that acute articular rheumatism is due to a form of strepto-coccus that has not yet been differentiated from streptococcus pyogenes.

Beattie, in the March number of the *Journal of Experimental Medicine,* has a different point of view. He believes and introduces a series of experiments to prove that the diplococcus isolated by Wasserman in Germany, Poynton, Payne, and himself in Britain is the direct cause of acute articular rheumatism. To support this view, he evidences his results in a series of rabbits which he inoculated wth strepto-coccus pyogenes and the micrococcus rheumaticus.

He also states that they were able to cultivate the microbes outside of the patient's body and to inoculate monkeys and rabbits, producing polyarthritis and endocarditis and other manifestations of rheumatic fever. The organism was thought to be terminal, but he produced it from patients not severely ill. Again, cultures taken at post mortems from blood of patients suffering from rheumatic fever was sterile, whereas those taken from synovial membranes showed the presence of the diplococcus.

He inoculated one series of rabbits with streptococcus and invariably obtained pus; another series with micrococcus rheumaticus and never obtained pus. In both instances he got articular symptoms, in one, endocarditis. In cases inoculated with strepto-coccus he obtained germs from blood, in cases with micrococcus, never.

His conclusions are that results from inoculations with streptococcus are different from those of micrococcus rheumatics; that micrococcus streptococcus, nor acute articular rheumatism as an attenuated streptococcical pyemia. In uncomplicated cases of acute rheumatism, the germ is not found in blood or joint exudates.

Holt believes that hereditary tendency plays a large part as the logical factor, and states that in two hundred of his cases a rheumatic family history was obtained. In my cases I find it extremely difficult to obtain any trace of hereditary influence, for as a rule the mothers deny all trace of disease in their family, which even the closest questioning fails to change, and insist all their people are healthy. Of their husband's family they usually and rather scornfully deny any knowledge or if they do tell of anything it is negative. In private practice in all my cases, a family history of some form of rheumatism has always been obtained.

*Read before the Cooper College Science Club.

My cases divide rheumatism into series.

First. Those who come to the clinic suffering from acute articular rheumatism with enlarged joints.

Second. Those suffering from chorea.

Third. Those with tonsillitis.

Fourth. Endocarditis.

First, articular rheumatism: Rebecca Atkins, age nine years, brought to clinic complaining of rheumatism. Family history negative. Two other children living and well. Contagious diseases: Has had chicken-pox and tonsilitis frequently. Present illness: Has had rheumatism for past six weeks. First, knee was swollen, then shoulder, now both hands. Has no appetite, can not sleep, has eaten nothing solid nor sweet since illness commenced. Physical examination: Child very much emaciated, throat clean, heart no murmur, no enlargement, accentuation of first sound, pulse rapid, but regular. Temperature, 97.6°. Respiration normal. Hands are very red and swollen. Right hand in particular. Child screams when hand is touched.

Treatment: Hands are covered with oil of wintergreen, done up in cotton, and bandaged. Tr. salicylates.

Child lived in Berkeley and did not return to the clinic, but sent a report that she was better.

Second Case. Hannah Sautell, age twelve years, complains of rheumatism. Family history excellent, four other children living and well. Contagious diseases: Whooping cough at five years, measles and mumps at six. Other illnesses At six months had attack of rheumatism in legs, cried when touched, has had it every winter since then. Had it a week ago in shoulder which was slightly swollen. When she has it in winter has very bad fever, and limbs swell greatly.

Present illness: Has pain over precordium whenever walks quickly, loses breath, is very nervous and irritable, appetite is good, sleeps well, bowels regular. Child is fairly well nourished, throat normal, lungs normal, heart has loud systolic murmur reflected to axilla.

Treatment: Liquor Potass. Arsenitis. Oil Gaultherin in Glycerine. Child came back to clinic in a week saying that she was much improved. Pain has disappeared.

Third case. Christine Sylvester, age seven years. Family history, paternal side, cancer. Maternal side, normal. Seven other children. Infectious diseases: Measles, mumps and whooping cough. Other illnesses: Is subject to rheumatism. Had attack of acute articular four months ago, in legs, arms and back. Has been complaining of pain in limbs and over heart. Child is very thin, anemic and poorly nourished. Throat, nose and lungs, normal. Heart enlarged to left apex, Mitral murmur all over heart, but best heard at apex. On right heel is a painful spot, heel is edematous. Temperature not increased. Treatment: Rest in bed, ice bag above heart. Oil Gaultheria, Tinct. Digitalis, Olive oil, lemonade without sugar, ad. lib.

The chorea cases were much more interesting, in that they were kept under observation for a longer period of time, the others not returning to the clinic after they were better and being lost sight of.

Second series chorea. Sophie Graham, age twelve years, American. Entered September 10, 1905. Family history: Father died of cancer at 36. Mother living and well. Infectious diseases: Whooping cough. Other illnesses: Chills and fever at two years. Inflammatory rheumatism at eight years, pain and swelling in limbs for a week. This was followed by St. Vitus' dance, which was limited to face and hands. Came to California from New York two years ago. Last winter had very severe attack of inflammatory rheumatism. Was in bed till April 29. Immediately chorea started in. Present illness: Child's mother noticed twitching of hands, then hands started to shake, this was followed by shaking and twitching of whole body.

Child is tall and strong looking, exceedingly well developed. Face twitches, tongue trembles. Reflexes all right. Lungs normal, a systolic murmur heard best at apex, faintly heard at base. Can hold still but wriggles and makes faces when not noticed; has marked difficulty in remaining still.

Treatment: Rest in bed, milk diet. Liquor Potass. Arsenitis. Oil Gaultheria.

15/9/05. Child much improved, can sit still easily, very little twitching; 30/9/05, child not as well, took overdose of arsenic; 15/10/05, child better.

Since then have heard from child and there has been no return of symptoms.

Rose Henzi, age fourteen years. Paternal history: Cancer. Maternal history: Tuberculosis. Infectious diseases: Measles, whooping cough, and tonsillitis frequently. Other diseases, rheumatism frequently in knee which was swollen and painful last winter.

Present illness: Child has been suffering past two weeks. Has pains in bones, suffers from dizziness, sleeps restlessly. Child well nourished, no nystagmus, eyes o. k., tongue is coated and trembles. Glands about neck ant. and post. cervical and anterior maxillary palpable. Lungs normal. Heart, pulsation over chest, no murmur. Heart slightly irregular in ryhthm, bounding and slight accentuation of second sound. Pulsation also observed in carotids. Slight twitching of face and upper extremities.

Treatment: Liquor Potass. Arsenitis.

Frank Delcanlo, age seven years, brought to clinic November 16, 1904, suffering from chorea. Father and mother living. Father very nervous. Mother well. Three sisters living, all subject to tonsillitis; one brother who has had two very bad attacks of inflammatory rheumatism and has endocarditis.

Infectious diseases: Measles, chicken pox, whooping cough, also tonsillitis. Has never had rheumatism, but has had growing pains.

Present illness: Was very badly frightened and afterwards began to twitch. Now can not stay in bed, can not sit in chair. Face, arms, legs twitch and can not be controlled. Heart very rapid, no murmur. Difficult of examination on account of uncontrolable twitching. Arms move wildly about, is very irritable.

Treatment: Put to bed on milk diet. Liquor Potass. Asenitis. Oil Gaultheria.

November 19, 1904. Three days later child worse, can not stay in bed, given chloral and bromide. Heart very rapid and bounding, eyes moving constantly. Fowler's solution continued.

November 20, child is a little quieter; November 25, child lies quietly but still twitches; December 1, child better; February 2, child still nervous and irritable, but better; February 13, child much better but wild; July 3, child again has chorea, also tonsils are red and swollen. Heart o. k.; July 6, child very restless, given Sod. Brom.; January, 1907, child again choreic; given arsenic; February, 1907; child is much better.

This has been a most interesting case throughout, being under observation constantly for two years and a half. Has varied forms of rheumatism. I also saw the elder boy who has had two very serious attacks of acute articular rheumatism with endocarditis, broken compensation and dilitation accompanied the first attack I saw and later he came to the medical clinic with a real *cor bovis*. Since last

year he has been in San Leandro and is much improved.

Mary Bertucci, aged nine years. Chorea. Mother and father living and well. Two other children living and well.

No infectious diseases. Other illnesses: Has had pain in legs. Brought to clinc for nervousness. Has pain and swelling in arm and legs. Child has all facies of chorea, has also a very stiff elbow joint, can not move arm from elbow, moves from shoulder. Moves continuously and twitches, can not touch nose with finger.

Treatment: Told to go to bed and be on milk and soup diet. No wine or coffee. Oil Gaultheria. Fowler's solution.

Child steadily improved. In six weeks arm moved normally.

Tonsillitis cases were not so numerous.

Dora De Rudue, came to clinic suffering from sore throat. Tonsils reddened, heart rapid, temperature 100. That afternoon was called to house, found child very restless and nervous. Temperature 102, heart rapid and bounding, no murmur, pulse 160. Next day child improved but pulse still 140. Next day throat symptoms entirely disappeared, heart rapid and pulse 140. Brought to clinic the following Friday, pulse weak and rapid, no murmur but irregular rhythm. Child comes to clinic once a week and is steadily improving.

Charles C., was taken ill with tonsillitis on Sunday; on Tuesday ankle very much swollen; on Thursday shoulder swollen and reddened. Heart rapid and flabby. Temperature 102, pulse 116. Went through regular attack of articular rheumatism.

Edna S., recurrent attacks of tonsillitis, always followed by swelling of joints.

We have had cases of purpura rheumatica and subcutaneous tendinous nodules in the children's clinic, but before my time.

Rheumatism in children is frequently overlooked on account of the indefiniteness of symptoms—instead of the acute abrupt onset as in adults, we frequently simply have pains in legs which are called by the mother "growing pains," an occasional swollen joint that is ascribed to a traumatism. Rheumatism is rarely dangerous to life, but very frequently interferes with usefulness on account of the cardiac complications. It rarely occurs but once and each renewed attack leaves the heart in a more weakened condition.

In summing up it seems to me that following the onset and the symptoms in these cases one can hardly doubt the specific infectious nature of the disease. The frequent ushering in by tonsillitis, the endocarditis, and polyarthritis following in some cases, the chorea in others, all point to a germ invasion. As to whether Cole and his followers are right in ascribing it to a pyemia or Beattie to a micrococcus rheumaticus remains for further study to prove. We all know that inoculations of streptococcus pyogenes are followed by articular symptoms and that both cases i. e. inoculations of streptococcus are followed by production of formic acid.

In the case of the micrococcus, Beattie states the quantity of formic acid found is large, that of strepto-coccus while present, is found in small quantity.

A FEW NOTES ON CLINICS FOR DISEASES OF THE SKIN.

By DOUGLASS W. MONTGOMERY, M. D.

The following cursory notes written for my own pleasure while on a short trip, have no pretension to being at all exhaustive. They may, however, interest my friends for a few minutes, and if so they will serve their purpose.

Before boarding the steamer at New York to cross the Atlantic I called on Dr. J. A. Fordyce, who kindly invited me to see his service in the City Hospital. The City Hospital turned out to be what I knew twenty years ago as Charity Hospital, and it was explained to me that it hurt the patients' feelings to be treated in an institution called a "Charity Hospital," so the name was changed. How pleasant it is to feel that even such patients have some recollections of what self-respect is, and, as if in accentuation of this mental attitude, the first patient seen had pediculosis corporis. Lice had so long pastured on his body that indelible traces were left, as extensive areas of pigmentation. Throughout these areas there were many light colored spots having superficially the appearance of scars. The pigmentation was particularly deep in the flexures. The interest of the case lay in a decided and recent loss of flesh, marked anemia with eosinophilia, and some chloasma spots on the cheeks. The deep pigmentation alone has often led these cases to be mistaken for Addison's disease, and when one gets in addition, as in this case, rapid loss of flesh, anemia and pigmentation of the checks the chances for error become so imminent as to be interesting.

In this patient the rapid loss of flesh had produced a curious change in the skin of his abdomen, that was shrivelled and puckered up like an old empty leather bag, a fitting emblem of the man's diminished fortunes. It may be, however, that the creepy beasties this man had had in his clothes had really been a dispensation of Providence, acting in the way referred to by David Harum in speaking of fleas, namely that a certain number of fleas is good for a dog, as they keep him from brooding and reflecting on the fact that he is a dog. In this view this was but another illustration of Emerson's doctrine of compensations.

The next patient Dr. Fordyce showed me was a young fellow afflicted with eczema scroti. The word "afflicted" is perfectly applicable in this disease, for the patient is scourged, whipped and stung by his malady. In addition to this exquisite torture the affection is apt to be obstinate, and under such circumstances relief may be awaited, though not patiently. In the instance under consideration there was a hard thickened scaly patch with much itching on the front of the bag. Considerable amelioration had been obtained by a course of lotions of resorcin gradually increasing in strength from ten to thirty per cent. till a decided inflammatory reaction was secured. Then the part was treated with a calming lotion till the inflammation subsided. It was a variety of the old principle of arousing enough inflammation to carry away with the accelerated and